CRISTIANO CARVALHO

Ponta Grossa, Paraná, Brazil • carvalho.cristiano@proton.me • pegasustec.dev • linkedin.com/in/ccarvalho-dev • github.com/cristianodabc

Summary

Senior Elixir engineer with 9+ years in backend engineering and 8+ years building Elixir/OTP systems. Designs event-sourced financial workflows for credit, verification, settlement, payouts, banking, and TMS ingestion. Works primarily with Commanded, Ecto, Oban, Broadway, Pub/Sub, and OTP systems. Creator and core maintainer of Jizoku, an open-source durable workflow runtime.

Education

ESTÁCIO DE SÁ UNIVERSITY Brazil

MBA, Information Security 2020 – 2022

- Data privacy and LGPD compliance, security governance; CISSP, CISM, CRISC, and ITIL curriculum.

B.Sc., Systems Analysis and Development 2014 – 2019

Experience

TRUCKSTOP.COM (ACQUIRED DENIM) Remote

Senior Elixir Engineer Nov 2020 – Present

- Evolved an event-sourced financial platform processing $2B+ in freight payments, covering credit reservations, invoice verification, settlement, batch payouts, and account lifecycle workflows; migrated live state and activity projections through phased backfills and consumer cutovers, preserving compatibility via event upcasting.
- Built a third-party verification subsystem across a four-phase rollout: CQRS command/event pairs, a threshold-driven rule engine, escalation states, and admin override APIs; decoupled it from job validation so verification failures no longer blocked approval.
- Built and maintained Bank of America and AtoB transaction flows using Broadway and Pub/Sub consumers, Oban workers, OTP state machines, idempotent dispatch, exponential backoff, and telemetry; automated weekly check payout batches with retry-safe creation and workflow deduplication.
- Designed multi-phase Oban workflows and real-time TMS/SFTP ingestion with explicit dependencies, concurrency controls, Cloud Storage events, validation, retries, and operational metrics; cut CPU on hot auto-review queries, added lifecycle queue indexes, and strengthened admin RBAC and sensitive-data handling.

STARFISH Remote

Elixir Engineer (final months concurrent with Denim) Mar 2020 – Feb 2021

- Built Elixir/Phoenix services and LiveView operational dashboards for cross-border payments, multi-currency settlement, and compliance workflows.
- Implemented Ecto-backed workflow and reporting paths that made payment and compliance state visible to operators.

SPLITPASS Remote

Elixir Engineer Aug 2019 – Jan 2020

- Designed and shipped Phoenix REST APIs, establishing authentication, Ecto validation, and error-response conventions.

IT'S FOUND Remote

Principal Engineer; Elixir Engineer Oct 2018 – Aug 2019

- Joined a small team in my first full-time Elixir role, expanding the product UI with Phoenix and helping shape the backend architecture and services.
- Progressed to Principal Engineer, leading technical direction, engineering conventions, and AWS infrastructure.
- Integrated a third-party shipping service to coordinate delivery of recovered lost items to their owners.

TELLUS Remote
Ruby Engineer Jun 2017 – Sep 2018

- Built Ruby on Rails APIs for real-estate financing workflows, document processing, and third-party lender integrations supporting the iOS client application.
- Contributed to the iOS client and later helped build the React.js web version of the product.

Open Source

JIZOKU (formerly Squid Mesh and Squidie) github.com/agentjido/jizoku
Creator and Core Maintainer Apr 2026 – Present

- Embedded persistent workflow runtime for Elixir with persisted execution, retries, approvals, compensation, replay, recovery history, and pluggable storage.
- 66 GitHub stars; 3.3k+ cumulative Hex downloads.

KANSOKU (formerly Squid Sonar) github.com/agentjido/kansoku
Creator and Core Maintainer May 2026 – Present

- Embeddable Phoenix LiveView operations dashboard for inspecting and controlling Jizoku workflows, including diagnosis, approvals, replay, cancel, and resume.
- 1.1k+ cumulative Hex downloads.

ALUDEL github.com/cristianodabc/aludel
Creator and Maintainer Mar 2026 – Present

- LLM evaluation workbench for Phoenix applications to compare prompts and detect quality regressions across OpenAI, Anthropic, and Ollama.
- 41 GitHub stars; 145k+ Hex downloads.

BEAMCONSOLE github.com/cristianodabc/beam-console
Creator and Maintainer Aug 2026 – Present

- Embeddable, read-only process flight recorder and process map for Phoenix and BEAM applications, exposing supervision topology, process lifecycle history, per-process activity, and node runtime health.
- 13 GitHub stars; 690+ Hex downloads.

ADDITIONAL CONTRIBUTIONS

- **Jido**: OTP-native autonomous agent framework.
- **Bedrock**: embedded distributed key-value store with strict serialization, cross-keyspace transactions, and write-ahead-log durability.

Skills & Interests

Core Elixir: Elixir, Erlang/OTP, Phoenix, LiveView, Ecto, Oban, Broadway, Commanded, GenStage, Telemetry

Systems: Event Sourcing, CQRS, OTP supervision, state machines, durable workflows, event upcasting, idempotency, saga compensation, observability

Data and Cloud: PostgreSQL, Redis, Google Cloud Pub/Sub, Cloud Storage, Cloud Run, Docker, Terraform, GitHub Actions; also Ruby on Rails, React.js, AWS

AI and Integrations: OpenAI, Anthropic, Ollama, LLM evaluation, agent frameworks, REST, GraphQL, webhooks, banking APIs, TMS/SFTP

Languages: Portuguese (native), English (fluent), Spanish (reading and listening comprehension)